



ACE500EC

Low-Dropout CMOS Voltage Regulator

Description

The ACE500EC series are a group of positive voltage regulators manufactured by CMOS technologies with high ripple rejection, ultra-low noise, low power consumption and low dropout voltage, which can prolong battery life in portable electronics. The ACE500EC series work with low-ESR ceramic capacitors, reducing the amount of board space necessary for power applications. The ACE500EC series consume less than $0.1\mu\text{A}$ in shutdown mode and have fast turn-on time less than $50\mu\text{s}$. The series are very suitable for the battery-powered equipment's, such as RF applications and other systems requiring a quiet voltage source

Features

- 500mA RF Low-Dropout Regulator With Enable
- Ultralow-Noise : $40\mu\text{VRMS}$ (10Hz~100kHz)
- High PSRR: 70dB@1kHz
- Fast Start-Up Time ($20\mu\text{s}$)
- Excellent Load/Line Transient Response
- Low Dropout Voltage: $110\text{mV}@100\text{mA}$
- Stable With a $1\mu\text{F}$ Ceramic Capacitor
- Available in Adjustable Voltage Version (0.6V to 5.5V)
- Built-in Current Limiter, Short-Circuit Protection

Application

- RF: VCOs, Receivers, ADCs
- Cellular and Cordless Telephones
- Handheld Organizers
- Audio
- Bluetooth, Wireless LAN
- Tablet, MID

Absolute Maximum Ratings

 Unless otherwise specified, $T_A=25^\circ\text{C}$

Parameter	Symbol	Max	Unit
Input Voltage	V_{IN}	$V_{\text{SS}}-0.3\sim V_{\text{SS}}+8$	V
Output Current	I_{OUT}	750	mA
Output Voltage	V_{OUT}	$V_{\text{SS}}-0.3\sim V_{\text{IN}}+0.3$	V
Power Dissipation	SOT-23-5	400	mW
	SOT-23-6		
Operating Temperature	T_{opr}	- 40~85	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 40~125	$^\circ\text{C}$
Soldering Temperature & Time	T_{solder}	$260^\circ\text{C}, 10\text{s}$	

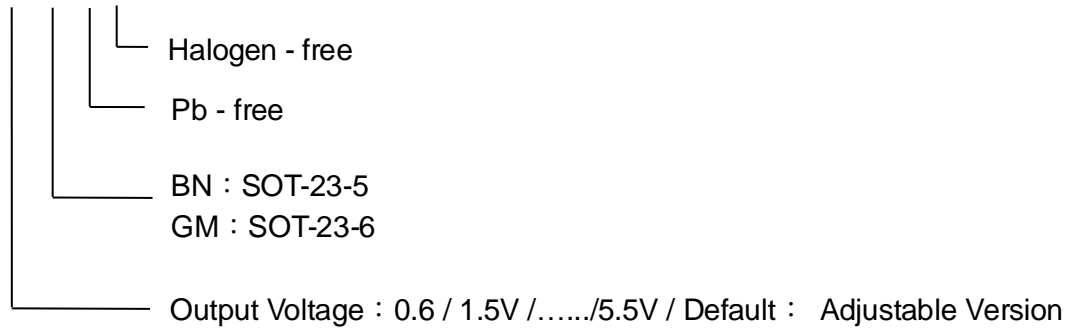


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Ordering information

ACE500EC XX XX + H





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Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

ACE Technology Co., LTD.
<http://www.ace-ele.com/>